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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/617,751	TAKALA, JARI	
	Examiner	Art Unit	
	KIMBERLY EVANS	3629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 29 May 2008.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-38 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-38 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 14 July 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/10/08</u> . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Response to Amendments

1. This action is in reply to the response filed on May 29, 2008.
2. Acknowledgement is made that the applicant has amended claims 1-15; and has added claims 16-38.
3. Claims 1 -38 are currently pending and have been examined.
4. The rejections of claims 1-15 have been updated to reflect the amendments.
5. The Examiner has carefully reviewed the Applicant's response and has determined that the rejection stands and is resubmitted below addressing the claims as modified by said amendments.

Information Disclosure Statement

6. The Information Disclosure Statement filed on September 10, 2008 has been considered.
An initialed copy of the Form 1449 is enclosed herewith.

Claim Rejections - 35 USC § 112- 1st Paragraph

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 6-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 6-9, 12, and 15, recite a "meter" which is considered new matter since this was not properly identified or described in the original specification. Claim 9 recites "a reallocater", "a reserver", "a setter", and "a transmitter" which is considered new matter since the aforementioned "reallocater", "reserver", and "setter" were not properly identified or described in the original specification. Claims 10, 11 and 13 recite "a definer" which is considered new matter since this was not properly identified or described in the original specification. Claims 14 and 15 recite "a processor" which is considered new matter since this was not properly identified or described in the original specification. Claim 14 further recites "a reserver" and "a transmitter" which is considered new matter since this was not properly identified or described in the original specification.

9. The added material which is not supported by the original disclosure is as follows:
 - i. The newly recited claim limitation in Claims 6 and 7 "...a meter..." appears to constitute new matter.
 - ii. The newly recited claim limitation in Claim 8 "...the meter and a public data network for communication of data..." appears to constitute new matter.
 - iii. The newly recited claim limitation in Claim 9 "...an allocater..." "...a reallocater configured to reallocate, in the meter..." "...a reserver", "...a setter...", "...a transmitter..." all appear to constitute new matter.
 - iv. The newly recited claim limitation in Claims 10, 11, and 13 "...a definer..." appears to constitute new matter.

- v. The newly recited claim limitation in Claim 12 "..a transmitter..", and "...a report from the meter to the rating device..." appears to constitute new matter.
- vi. The newly recited claim limitation in Claim 15 "...a meter configured to measure..." appears to constitute new matter.
- vii. The newly recited claim limitation in Claims 14 and 15 "a processor" appears to constitute new matter.
- viii. The newly recited claim limitation in Claim 14 "a reserver" and "a transmitter" appears to constitute new matter.

In particular, Applicant does not point to, nor was the Examiner able to find, any support for the newly added claim language or language to support claims 6-15 within the specification as originally filed. As such, Applicant is respectfully requested to clarify the above issues and to specifically point out support for the newly added limitations in the originally filed specification and claims. Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claim 1, recites "...the rating device..." in the second limitation. There is insufficient antecedent basis for this limitation in the claim.

12. Claim 9 provides for the use of a reserver, a setter, and a reallocater, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.
13. Claim 14 provides for the use of a reserver, and a processor, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.
14. Claim 15 provides for the use of a meter, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.
15. Claim 30 provides for the use of a “reserving means” and a “processing means..” but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.
16. Claim 32 provides for the use of a “processing means” and “metering means”, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

17. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner is not clear as to whether Claim 21 is directed toward a process or a system. Claim 21 is a dependent claim of independent claim 15, which is defined as an apparatus. Claim 21, limitation 1 discloses..."wherein, after all of the reserved resources are used, a report is sent from the apparatus..." In order to send a report from the apparatus a method/process/ and/or software would need to enable this step to happen, therefore, "a report is sent from the apparatus" will be interpreted by the Examiner as a "method" for purposes of compact prosecution.

Claim Rejections - 35 USC § 101

18. The following is a quotation of the first paragraph of 35 U.S.C. 101:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

19. Claims 1-5 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

20. The basis of this rejection is set forth in a two-prong test of:

- a) whether the invention is within the technological arts; and
- b) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as

opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process (also a method) claim to pass muster, the recited process must somehow apply, involve, use or advance the technological arts.

21. Claims 1-5 and 23-29 do not qualify as a statutory process since they recite purely mental steps. To qualify as a § 101 statutory process, the claim should positively recite the other statutory class (thing or product) to which it is tied. For example, by identifying the apparatus that accomplishes the method steps, or positively recite the subject matter that is being transformed, for example by identifying the material that is being changed to a different state.
22. In order for a method to be considered a "process" under §101, a claimed process must either: (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials). *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972). If neither of these requirements is met by the claim, the method is not a patent eligible process under §101 and is non-statutory subject matter. Therefore claims 1-5, and 23-29 are rejected under 35 U.S.C. 101.
23. Claims 1-38 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The aforementioned claims are directed toward providing information in relation to an electronic communication device via a data signal. However, under the current guidelines of 35 USC 101, computer software must be tangibly embodied on a computer readable medium, and, when executed by a computer processor, perform the steps of the software. In their broadest reasonable interpretation and in light of the specification, claims 1-38 as recited, can be interpreted to be embodied

- on abstract mediums such as carrier waves and signals, and therefore not eligible for patent protection. Accordingly, these claims are not eligible for patent protection.
24. Claims 6, 7, 21, and 26 are rejected under 35 U.S.C. 101 because the claimed component “..rating device configured to obtain information..” is interpreted as being software per se; software does not fall within a statutory category of patentability.
25. Claims 6, 7, are rejected under 35 U.S.C. 101 because the claimed component “..a meter configured to allocate...” is interpreted as being software per se; software does not fall within a statutory category of patentability.
26. Claim 9 is rejected under 35 U.S.C. 101 because the claimed component “..a reallocater configured to reallocate”; “...a reserver configured to reserve”; “ ...a setter configured to set...”; “...a transmitter configured to send...” “...an allocater, configured to allocate...” is interpreted as being software per se; software does not fall within a statutory category of patentability. The corresponding dependent claims do not remedy this flaw and are also rejected.
27. Claims 10, 11 and 13 are rejected under 35 U.S.C. 101 because the claimed component “...a definer configured to define...” is interpreted as being software per se; software does not fall within a statutory category of patentability.
28. Claims 14 and 15 are rejected under 35 U.S.C. 101 because the claimed component “...a reserver configured to reserve...” is interpreted as being software per se; software does not fall within a statutory category of patentability.
29. Claims 9, 14, 15, 30, and 32 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an

improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

30. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

31. Claims 1-5, and 28 are rejected under 35 USC 102(a) as being anticipated by, P. Francis et al., "Design Issues for Prepaid Data Service", draft-francis-prepaid-00.txt, IETF Internet Draft, June 2002.

32. With respect to Claim 1,

Francis as shown, discloses the following limitations,

- *reserving resources from a prepayment system for prepaid data services, the prepaid data services being divided into at least two service groups of different charging criteria in a network*, (see at least page 3, definition of Account: "...also called prepaid account...Balance: also called prepaid balance. This is the total amount of money that the user has put into his prepaid account..."; page 4: "... Multi-source prepaid: "...this is where multiple services (data, voice, etc.) can be used from the same prepaid account..., Prepaid Application Database (PPDB):this is the database

that stores the account balance for the user as well as which quotas have been allocated to which PUPs...")

- *an initial data delivery limit is set for each service group based on the resources and information about the charging criteria and; (see at least page 3, Account: "...also called prepaid account. It starts when the user purchases an account....Balance: also called prepaid balance. This is the total amount of money that the user has put into his prepaid account..."; page 4, Quota: "...this is the amount of usage (time or bytes) that has been allocated by the PUP...", Usage: "...measured as time or bytes (in the case of data or voice routers/switches), or money (in the case of content or other transaction servers)...")*
- *sending a message containing information about the initial data delivery limits from the rating device to a measuring device, wherein (see at least Figure 1 and Page 4, Prepaid Application Database (PPDB):this is the database that stores the account balance for the user as well as which quotas have been allocated to which PUPs..., Prepaid Application Server (PAS): "... this is the box that runs (or talks to) the prepaid application and interacts with the PUP--i.e. allocates quotas to PUP, tells the PUP whether to allow or deny service, and so on....PAS interfaces on the back end with a single Prepaid Application Database...")*
- *proportional data delivery limits are allocated for each service group individually (see at least page 4: Prepaid Application Server (PAS): "...allocates quotas to PUP, tells the PUP whether to allow or deny service, and so on..."; Page 8, section 4.1d: Data, voice, and other "higher level" data services such as content download, location services, etc., are combined within the same prepaid account..."; U2: ..." say the user buys a \$10 prepaid account for voice and data. The user should be able to use \$5 data and \$5 voice, \$9 data and \$1 voice, or \$9.90 data and \$.10 voice...")*
- *remaining resources to the service groups are reallocated based on pricing weights of the service groups to obtain new proportional data delivery limits for each service*

group individually, (see at least Page 4, Usage Session: "...this is usage extended over a period of time, during which the PAS allocates quotas. It begins with authentication and initial allocation, and ends either when no more quotas are allocated, or when user terminates usage...", Usage Transaction: "...consists of a single quota allocation for the exact amount of the transaction. Either the entire transaction is allowed, or none of it..."; page 22 sections i thru l: "...During account replenishment....the voice PUP requests an allocation (for instance, because the user starts a voice call)...at this point the (data) PUP has used an additional 25kbytes, and so reports a usage of 40Kbytes. The PAS returns the remaining \$19 to the balance for a total of \$20. The PAS allocates half each to the voice PUP and the (data) PUP, minus \$1 each to allow for a replenishment warning...")

- *the new proportional data delivery limits being for use in delivery of data after a service group has exceeded its proportional data delivery limit. (see at least page 11, Section 5.2 Performance, Basic Capabilities, BC10: "...The PAS is able to allocate a quota, as measured in session time or bytes, to the PUP. The PAS can also tell the PUP what to do when the quota is reached...")*

33. With respect to Claim 2,

Francis discloses all of the above limitations. Francis further discloses,

- *a proportional data delivery limit is defined for each service group as a proportion of the initial data delivery limit (see at least Page 4, Prepaid Application Database: "...conceptually, this is the database that stores the account balance for the user as well as which quotas have been allocated to which PUPs...", Usage session: "...This is usage extended over a period of time, during which the PAS allocates quotas. It begins with authentication and initial allocation..." Prepaid Usage Point (PUP): "...where usage is measured and enforced....")*

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34. With respect to Claim 3,

Francis discloses all of the above limitations. Francis further discloses,

- *a pricing weight is defined for each service group as a proportion of a sum of the proportional data delivery limits to the initial data delivery limit of the service group.* (see at least Page 4, definition of quota: "...the amount of usage (time or bytes) that has been allocated to the PUP" , Usage session: "....this is usage extended over a period of time, during which the PAS allocates quotas...begins with authentication and initial allocation, and ends either when no more quotas are allocated..."; page 12, Advanced Capabilities: AC10: "...the PAS is able to request interim reports from the PUP....")

35. With respect to Claims 4,

Francis discloses all of the above limitations. Francis further discloses,

- *a report is sent from the measuring device to the rating device after all of the reserved resources are used.* (see at least page 10: "...say the user then uses 15 Mbytes of streaming (75% of the quota) and 0.5 Mbytes of non-streaming (25% of the quota). 75% + 25% =100%, and so the PUP would expire the quota and report..."; page 12, Advanced Capabilities: AC10: "...the PAS is able to request interim reports from the PUP....")

36. With respect to Claim 5,

Francis discloses all of the above limitations. Francis further discloses,

- *the initial data delivery limit is defined as a volume equivalent to a same amount of money for each service group.* (See at least Page 4, Quota: "...the amount of usage (time or bytes) that has been allocated to the PUP...", Prepaid Application Server (PAS): "... allocates quotas to PUP, tells the PUP whether to allow or deny service..."; page 8, U2: "...the user is able to use each service as much or as little as he wishes

(to a fine level of granularity)....say the user buys a \$10 prepaid account for voice and data. The user should be able to use \$5 data and \$5 voice...")

37. With respect to Claim 28,

Francis discloses all of the above limitations. Francis further discloses,

- *reserving resources from a prepayment system for prepaid data services divided into at least two service groups of different charging criteria* (see at least page 3, definition of Account: "...also called prepaid account...Balance: also called prepaid balance. This is the total amount of money that the user has put into his prepaid account..."; page 4: "... Multi-source prepaid: "...this is where multiple services (data, voice, etc.) can be used from the same prepaid account..., Prepaid Application Database (PPDB):this is the database that stores the account balance for the user as well as which quotas have been allocated to which PUPs...")
- *obtaining information of prepaid resources reserved from a prepayment system for prepaid data services divided into at least two service groups of different charging criteria and of charging criteria of service groups of prepaid data services* (see at least page 3, Account: "...also called prepaid account. It starts when the user purchases an account....Balance: also called prepaid balance. This is the total amount of money that the user has put into his prepaid account..."; page 4, Quota: "...this is the amount of usage (time or bytes) that has been allocated by the PUP...", Usage: "...measured as time or bytes (in the case of data or voice routers/switches), or money (in the case of content or other transaction servers)...")
- *and to set initial data delivery limits for the service groups based on the obtained information sending a message containing information about initial data deliver limits to a measuring device* (see at least Page 4, definition of quota: "...the amount of usage (time or bytes) that has been allocated to the PUP", Usage session: "...this is usage extended over a period of time, during which the PAS allocates

quotas...begins with authentication and initial allocation, and ends either when no more quotas are allocated..."; page 10, section AC03: "...the PUP can be configured with differential rating information for one or more of the four differential accounting types"; AC03, 2: "... The PUP is preconfigured with rating information for each user (or class of user), and can apply this rating information to the (single) quota conveyed to the PAS...")

Claim Rejections - 35 USC § 103

38. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

39. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- a) Determining the scope and contents of the prior art.
- b) Ascertaining the differences between the prior art and the claims at issue.
- c) Resolving the level of ordinary skill in the pertinent art.
- d) Considering objective evidence present in the application indicating obviousness or nonobviousness.

40. Claims 6-27, and 29-38 are rejected as being unpatentable over Francis et al., in view of Tubinis, US Patent Application Publication No US 2003/0014367 A1.

41. With respect to Claims 6, and 7,

Francis discloses all of the above limitations. Francis further discloses,

- *a prepayment system hosting prepaid resources*, , (see at least page 3, definition of Account: "...also called prepaid account...Balance: also called prepaid balance. This is the total amount of money that the user has put into his prepaid account..."; page 4: "... Multi-source prepaid: "...this is where multiple services (data, voice, etc.) can be used from the same prepaid account..., Prepaid Application Database (PPDB):this is the database that stores the account balance for the user as well as which quotas have been allocated to which PUPs...")
- *at least one data communication network*, (see at least page 3: "...a data service may involve multiple data connections, for instance one for VPN access and another for internet access, or one for the PDA and another for the laptop.")
- *and to reallocate remaining free resources to the service groups based on pricing weights of the service groups obtain new proportional data delivery limits for each service group individually for delivery of data when a service group exceeds its proportional data delivery limit* (see at least page 13: "...the PAS could then give 50 minutes to the Voice PUP. If the voice call reached 50 minutes, the PAS could take 25Mbytes from the data PUP and give another 25 minutes to the voice PUP and so on. The best strategy for how much to give and take depends on the expected traffic and call patterns...")

Francis discloses all of the above limitations, Francis does not disclose the following limitation, but Tubinis however as shown discloses,

- *a rating device configured to obtain information of the prepaid resources and of charging criteria of service groups to set initial data delivery limits for the service groups based on the obtained information, (see at least paragraph 11: "...Calls are routed from a network 116 to a Prepaid Adjunct Processor 118, which is responsible for metering the call, identifying when a prepaid threshold has been reached... In the embodiment of system 101, the rating and account balance information is stored in a separate computer 120 and the functions performed by the Prepaid Adjunct Processor are initialized by computer 120.")*
- *a meter configured to allocate proportional data delivery limits for each service group individually, to measure use of each of the service groups (see at least paragraph 14: "...Based on the monetary balance remaining in the electronic account and the cost of the service to be rendered (e.g., dollars per unit of time or volume), a rating and accounting subsystem can calculate the number of minutes or volume of information units (e.g., bytes) left to reach a prepaid threshold or spending threshold. The rating/accounting computer 120 communicates a message to the Prepaid Adjunct Processor 118 that allows the Prepaid Adjunct Processor to initialize an internal meter which measures the duration for which the call is in progress (starting when the called party 114 answers) or the volume of information units that flow through the transport path during the call, starting from when a voice session for the call is established.")*

It would have been obvious to one ordinary skilled in the art at the time of the invention to combine the Prepaid Data Services design of Francis with the Billing System, specifically the rating/accounting computer and the Prepaid Adjunct Processor of Tubinis because this would be an efficient means for metering, pricing and billing communication services real-time via prepaid (electronic) charging account.

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42. With respect to Claim 8,

Francis and Tubinis disclose all of the above limitations, Tubinis further discloses,

- *the at least one data communication network comprises a packet core communication network for communication of data between users and a public data network for communication of data between the meter and providers of the prepaid services.* (see at least paragraph 17: "...The need to meter, price and bill communications services is recognized on mobile (i.e., wireless) communications networks (MCNs), as MCNs (mobile telecommunications networks, mobile data communications networks and combinations thereof..."); paragraph 19: "...MCNs are often referred to as Public Land Mobile Networks (PLMNs)..."; Figure 3, paragraph 32: "...FIG. 3 is a block diagram illustrating a communications network 1 that includes at least MCNs 2 and 4, one or more packet data networks (PDNs) 6, a public switched telephone network (PSTN) 8 and one or more other communications networks 10, which each can be any of a variety of types of communications networks. A PDN may be any communications network capable of communicating information encapsulated in packets, for example, an Internet Protocol-based (IP-based) network, an X.25-based network, or an Asynchronous Transfer Mode (ATM) network...")

It would have been obvious to one ordinary skilled in the art at the time of the invention to combine the Prepaid Data Services design of Francis with the mobile communications network, specifically the packet switching networks of Tubinis because it enables wireless communications between two or more of the plurality of network resources.

43. With respect to Claim 9, 23, 32, and 37

Francis and Tubinis disclose all of the above limitations, Francis further discloses,

- *the prepaid data services being divided into at least two service groups of different charging criteria in a network* (see at least Page 4, "... Multi-source prepaid: "...this is

where multiple services (data, voice, etc.) can be used from the same prepaid account..., Prepaid Application Database (PPDB):this is the database that stores the account balance for the user as well as which quotas have been allocated to which PUPs...”, Prepaid Application Server (PAS): “...this is the box that runs (or talks to) the prepaid application and interacts with the PUP.....allocates quotas to PUP, tells the PUP whether to allow or deny service, and so on....”)

- *the new proportional data delivery limits being for use in delivery of data after a service group has exceeded its proportional data delivery limit.* (see at least Page 12, first paragraph, last sentence: “....the PAS should be able to shrink quotas so that the most efficient strategy, whatever it is, may be implemented...”; Page 4, definition of Prepaid Usage Point (PUP): “..this is where usage is measured and enforced. The PUP receives quotas from the PAS, and either allows or denies usage to the user.”)
- *a reallocater configured to reallocate, in the meter, remaining resources to the service groups based on pricing weights of the service groups to obtain new proportional data delivery limits for each service group individually* (see at least page 13: “...the PAS could then give 50 minutes to the Voice PUP. If the voice call reached 50 minutes, the PAS could take 25Mbytes from the data PUP and give another 25 minutes to the voice PUP and so on. The best strategy for how much to give and take depends on the expected traffic and call patterns...”)

Francis and Tubinis disclose all of the above limitations, Tubinis further discloses,

- *a reserver configured to reserve resources from a prepayment system for prepaid data services,* (see at least paragraph 13: “...the calling party 102 makes a prepayment into an electronic account, which is stored in a database on the network...the calling party terminal (i.e., subscriber terminal) may be uniquely identified as a prepaid account holder and be automatically routed to the Prepaid Adjunct Processor...”; paragraph 14: “...In response to the Prepaid Adjunct

Processor 118 receiving the call, the calling party 42 is asked for the unique code to allow the adjunct processor to identify the electronic account in which the prepaid amount is resident...”)

- *a setter configured to set via a rating device, an initial data delivery limit for each service group based on the resources and information about the charging criteria,* (see at least paragraph 8: “...With such rate information, it is possible to determine a specific time quantity (for time-based metering) or a specific volume quantity (for volume based metering of volumes of data) for which a voice service can be provided before such provisioning should be stopped (i.e., the call should be disconnected). For example, before providing a voice service, the balance present in a prepaid account may be divided by the rate per unit of time or volume for the service to produce a service value. This voice service value could then be used to preset a time or volume threshold. The voice service can then be metered until the threshold is reached, at which time higher level processing can be notified that the threshold has been reached...”; paragraph 11: “...Calls are routed from a network 116 to a Prepaid Adjunct Processor 118, which is responsible for metering the call, identifying when a prepaid threshold has been reached...”)
- *a transmitter configured to send a message containing information about the initial data delivery limits from the rating device to a measuring device,* (see at least paragraph 14: “...The rating/accounting computer 120 communicates a message to the Prepaid Adjunct Processor 118 that allows the Prepaid Adjunct Processor to initialize an internal meter which measures the duration for which the call is in progress (starting when the called party 114 answers) or the volume of information units that flow through the transport path during the call, starting from when a voice session for the call is established...”)
- *an allocator, configured to allocate in the meter, proportional data delivery limits for each service group individually,* (see at least paragraph 11: “...Prepaid Adjunct

Processor 118, which is responsible for metering the call... In the embodiment of system 101, the rating and account balance information is stored in a separate computer 120 and the functions performed by the Prepaid Adjunct Processor are initialized by computer 120...”; paragraph 14: “...the rating/accounting computer 120 communicates a message to the Prepaid Adjunct Processor 118 that allows the Prepaid Adjunct Processor to initialize an internal meter...”)

It would have been obvious to one ordinary skilled in the art at the time of the invention to combine the Prepaid Data Service design of Francis with the Billing System of Tubinis because the rating/accounting computer is an effective means for communicating to the Prepaid Adjunct Processor and initializing the inter meter hence, identifying when a prepaid threshold has been reached.

44. With respect to Claims 10 and 11,

Francis and Tubinis disclose all of the above limitations, Francis further discloses,

- *a definer configured to define a proportional data delivery limit for each service group as a proportion of the initial data delivery limit*
- *the definer is further configured to define a pricing weight for each service group as a proportion of a sum of the proportional data delivery limits to the initial data delivery limit of the service group*

(see at least Page 4, Prepaid Application Server (PAS): “...this is the box that runs (or talks to) the prepaid application and interacts with the PUP—i.e. allocates quotas to PUP, tells the PUP whether to allow or deny service, and so on....” ;page 10: “...AC03: “...the PUP can be configured with differential rating...the PAS conveys multiple quotas, one for each type of differential accounting..the PUP would keep track of the fraction of the quota used by each, and when the sum of the fractions totaled to 1, the PUP would consider the quota expired and report to the PAS...”)

45. With respect to Claim 12,

Francis and Tubinis disclose all of the above limitations, Tubinis further discloses,

- *the transmitter is further configured to send a report from the meter to the rating device after all of the reserved resources are used* (see at least paragraph 171: “...For each session or telephone call across an MCN for postpaid charging, an operator generates a Call Detail Report (CDR), and consolidates these CDRs to generate the periodic bill...”; paragraph 173: “...Each time a CDR is generated, the CDR may be reported to a billing module (e.g., charging gateway 45 of FIG. 5), which typically resides on a network node separate from the node on which the metering occurs...”; paragraph 186: “...Each entry 1101 may include an APN IE 1102, a called party number IE 1104, a tariff switch time E 1106, a time-to-count conversion ratio IE 1107, a count metering unit IE 1108, a time-based reporting IE 1110, a count metering downlink/uplink ratio E 1112, a port address list IE 1113, a charging-type IE 1115, an APN profile distribution IE 1114 a top-up opportunity IE 1116, pop-up/top-up information IE 1118 and one or more other IEs...”; paragraph 190: “...If the type of prepaid charging specified by IE 1014 is time-based prepaid charging, then IE 1106 may be used to determine when a report is to be transmitted from an SSF module to an SCF module so that the SCF module may determine a new time threshold based on the prepaid amount and new charging rate...”)

It would have been obvious to one ordinary skilled in the art at the time of the invention to combine the Prepaid Data Service design of Francis with the CDR and Billing System of Tubinis because the Call Detail Record would be an efficient means for tracking the duration of a session or volume of bytes consumed during a session. In addition, the count metering unit is an efficient means for specifying the information unit to be used to meter the number of information units exchanged (i.e. bytes, packet, or other information), while the SCF module is an effective means for receiving up-to-date usage

information, it can also provide updated information to the SSF module in accordance with the change of charging rate.

46. With respect to Claims 13, 18, 22, 27, 29, and 36,

Francis and Tubinis discloses all of the above limitations, Francis further discloses,

- *the initial data delivery limit is defined as a volume equivalent to a same amount of money for each service group.* (See at least Page 4, Quota: "...the amount of usage (time or bytes) that has been allocated to the PUP...", Prepaid Application Server (PAS): "... allocates quotas to PUP, tells the PUP whether to allow or deny service..."; page 8, U2: "...the user is able to use each service as much or as little as he wishes (to a fine level of granularity)...say the user buys a \$10 prepaid account for voice and data. The user should be able to use \$5 data and \$5 voice...")

47. With respect to Claims 14, 28, 30, and 38

Francis and Tubinis discloses all of the above limitations, Francis further discloses,

- *a device comprising a reserver to reserve resources from a prepaying system for prepaid data services divided into at least two service groups of different charging criteria;* (see at least page 3: "...and Prepaid Application Database (PPDB): "...this is the database that stores the account balance for the user as well as which quotas have been allocated to which PUPs..."; page 4, definition of Prepaid Application Server (PAS): "...this is the box that runs (or talks to) the prepaid application and interacts with the PUP.....allocates quotas to PUP, tells the PUP whether to allow or deny service, and so on...")
- *a processor configured to obtain information of prepaid resources reserved from a prepayment system for prepaid data services divided into at least two service groups of different charging criteria and of charging criteria of service groups of prepaid data services* (see at least page 3, definition of account: "...also called prepaid account,

and balance: also called prepaid balance. This is the total amount of money that the user has put into his prepaid account”, and Prepaid Application Database (PPDB): “....this is the database that stores the account balance for the user as well as which quotas have been allocated to which PUPs...”; page 4, definition: multi-source prepaid: “...this is where multiple services (data, voice, etc.) can be used from the same prepaid account”)

- *and to set initial data delivery limits for the service groups based on the obtained information* (see at least Page 10, AC03, 2: “...the PUP is pre-configured with rating information for each user....and can apply this rating information to the quota conveyed to the PAS....”)

Francis and Tubinis disclose all of the above limitations; Tubinis further discloses,

- *a transmitter configured to send a message containing information about initial data deliver limits to a measuring device.* (see at least paragraph 14: “...The rating/accounting computer 120 communicates a message to the Prepaid Adjunct Processor 118 that allows the Prepaid Adjunct Processor to initialize an internal meter which measures the duration for which the call is in progress (starting when the called party 114 answers) or the volume of information units that flow through the transport path during the call, starting from when a voice session for the call is established...”)

It would have been obvious to one ordinary skilled in the art at the time of the invention to combine the Prepaid Data Service design of Francis with the Billing System, specifically the computer 120 and the Prepaid Adjunct Processor of Tubinis because the computer along with the Prepaid Adjunct Processor (internal meter) is an efficient means for communicating, and determining the specific time quantity or specific volume quantity for a multimedia service and identifying when a prepaid threshold has been reached.

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48. With respect to Claim 15,

Francis discloses all of the above limitations. Francis further discloses,

- *an apparatus comprising: a processor configured to allocate proportional data delivery limits for each of at least two data service groups of different charging criteria* (see at least Page 10, AC03: “The PUP can be configured with differential rating information for one or more of the four differential accounting types under usage...” and see at least Page 10 AC03.1: “...the PAS conveys multiple quotas, one for each type of differential accounting.....”)
- *to reallocate remaining free resources to the service groups based on pricing weights of the service groups* (see at least page 13: “...the PAS could then give 50 minutes to the Voice PUP. If the voice call reached 50 minutes, the PAS could take 25Mbytes from the data PUP and give another 25 minutes to the voice PUP and so on. The best strategy for how much to give and take depends on the expected traffic and call patterns...”)
- *to obtain new proportional data delivery limits for each service group individually for delivery of data when a service group exceeds its proportional data delivery limit* (see at least Page 11, section 5.2, Performance, second paragraph: “....this increases performance demands on the PAS...and on the PADB (which must update the database after a quota allocation or usage report....”) and Basic Capabilities: BC10: “...the PAS can also tell the PUP what to do when the quota is reached....”)

Francis and Tubinis disclose all of the above limitations; Tubinis further discloses,

- *a meter configured to measure the use of each of the service groups* (see at least paragraph 14: “...The rating/accounting computer 120 communicates a message to the Prepaid Adjunct Processor 118 that allows the Prepaid Adjunct Processor to initialize an internal meter which measures the duration for which the call is in progress (starting when the called party 114 answers) or the volume of information

units that flow through the transport path during the call, starting from when a voice session for the call is established.")

It would have been obvious to one ordinary skilled in the art at the time of the invention to combine the Prepaid Data Services design of Francis with the Billing System, specifically the rating/accounting computer and the Prepaid Adjunct Processor of Tubinis because this would be an efficient means for metering, pricing and billing communication services real-time via prepaid (electronic) charging account.

49. With respect to Claims 16, 24, and 33,

Francis and Tubinis discloses all of the above limitations, Francis further discloses,

- *a proportional data delivery limit is defined for each service group as a proportion of the initial data delivery limit* (see at least Page 4, Prepaid Application Database: "...conceptually, this is the database that stores the account balance for the user as well as which quotas have been allocated to which PUPs...", Usage session: "...This is usage extended over a period of time, during which the PAS allocates quotas. It begins with authentication and initial allocation..." Prepaid Usage Point (PUP): "...where usage is measured and enforced....")

50. With respect to Claims 17, 25, and 34,

Francis and Tubinis discloses all of the above limitations, Francis further discloses,

- *a pricing weight is defined for each service group as a proportion of a sum of the proportional data delivery limits to the initial data delivery limit of the service group.* (see at least Page 4, definition of quota: "...the amount of usage (time or bytes) that has been allocated to the PUP" , Usage session: "...this is usage extended over a period of time, during which the PAS allocates quotas...begins with authentication and initial allocation, and ends either when no more quotas are allocated..."; page 12, Advanced Capabilities: AC10: "...the PAS is able to request interim reports from the PUP....")

51. With respect to Claim 21, and 35

Francis and Tubinis discloses all of the above limitations, Francis further discloses,

- *after all of the reserved resources are used, a report is sent from the apparatus to a rating device configured to obtain information of the prepaid resources and of charging criteria of service groups and to set initial data delivery limits for the service groups based on the obtained information.* (see at least Page 4, definition of Prepaid Application Server (PAS): "...this is the box that runs (or talks to) the prepaid application and interacts with the PUP.....allocates quotas to PUP, tells the PUP whether to allow or deny service, and so on...each PAS interfaces on the back end with a single Prepaid Application Database (PPDB).."; page 13, Advanced Capabilities, paragraph AC10: "...the PAS is able to request interim reports from the PUP to occur at specified usage levels....")

52. With respect to Claim 26,

Francis and Tubinis discloses all of the above limitations, Francis further discloses,

- *a report is sent to a rating device after all of the reserved resources are used* (see at least page 10: "...say the user then uses 15 Mbytes of streaming (75% of the quota) and 0.5 Mbytes of non-streaming (25% of the quota). 75% + 25% =100%, and so the PUP would expire the quota and report..."; page 12, Advanced Capabilities: AC10: "...the PAS is able to request interim reports from the PUP....")
- *a rating device configured to obtain information of the prepaid resources and of charging criteria of service groups to set initial data delivery limits for the service groups based on the obtained information,* (see at least Page 4, Prepaid Application Server (PAS):"...this is the box that runs (or talks to) the prepaid application and interacts with the PUP.....allocates quotas to PUP, tells the PUP whether to allow or deny service, and so on...."; page 10, ACO3, 2: "... The PUP is preconfigured with

rating information for each user (or class of user), and can apply this rating information to the (single) quota conveyed to the PAS...”)

53. With respect to Claim 37

Francis and Tubinis discloses all of the above limitations, Francis further discloses,

- *allocating proportional data delivery limits for each of at least two data service groups of different charging criteria;* (see at least Page 4, Prepaid Application Database: “...conceptually, this is the database that stores the account balance for the user as well as which quotas have been allocated to which PUPs...”, Usage session: “...This is usage extended over a period of time, during which the PAS allocates quotas. It begins with authentication and initial allocation...” Prepaid Usage Point (PUP): “...where usage is measured and enforced....”)
- *and reallocating remaining free resources to the service groups based on pricing weights of the service groups to obtain new proportional data delivery limits for each service group individually for delivery of data when a service group exceeds its proportional data delivery limit.* (see at least page 13: “...the PAS could then give 50 minutes to the Voice PUP. If the voice call reached 50 minutes, the PAS could take 25Mbytes from the data PUP and give another 25 minutes to the voice PUP and so on. The best strategy for how much to give and take depends on the expected traffic and call patterns...”)

Francis and Tubinis discloses all of the above limitations, Tubinis further discloses,

- *measuring use of each of the service groups;* (see at least paragraph 14: “...The rating/accounting computer 120 communicates a message to the Prepaid Adjunct Processor 118 that allows the Prepaid Adjunct Processor to initialize an internal meter which measures the duration for which the call is in progress (starting when the called party 114 answers) or the volume of information units that flow through the

transport path during the call, starting from when a voice session for the call is established. ...")

It would have been obvious to one ordinary skilled in the art at the time of the invention to combine the Prepaid Data Services design of Francis with the Billing System, specifically the rating/accounting computer and the Prepaid Adjunct Processor of Tubinis because this would be an efficient means for metering, pricing and billing communication services real-time via prepaid (electronic) charging account.

Response to Arguments

54. Applicant's arguments received on May 29, 2008 have been fully considered but they are not persuasive. Applicant's arguments will be addressed herein below in the order in which they appear in the response filed May 29, 2008.
55. With regard to limitations of applicant's amended claims 1-15 and newly added claims 16-38, beginning on page 15 of the Remarks, Applicant broadly states that "...Francis fails to disclose each and every limitation of the pending claims..". In response, all of the limitations which Applicant disputes as missing in the applied reference is fully disclosed or obvious in view of the collective teachings of Francis et al., and Tubinis and based on the logic of one ordinarily skilled in the art. Detailed explanations are given in the preceding sections of the present Office Action.
56. In addition, in response to Applicant's argument that the reference (Francis) fails to show certain features of Applicant's invention, it is noted that the features upon which applicant relies:
 - i. "...a meter ..." appears to constitute new matter.

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- ii. "...the meter and a public data network for communication of data..." appears to constitute new matter.
- iii. "...an allocator..." "...a reallocater configured to reallocate, in the meter..." "...a reserver", "...a setter...", "...a transmitter..." appears to constitute new matter.
- iv. "...a definer..." appears to constitute new matter.
- v. "...a transmitter..", "...a report from the meter to the rating device..." appears to constitute new matter.
- vi. "...a meter configured to measure..." appears to constitute new matter.
- vii. "a processor" appears to constitute new matter.
- viii. "a reserver" and "a transmitter" appears to constitute new matter.

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The Examiner hereby identifies "...a meter..." as identified in claims 6 and 7; "...the meter and a public data network for communication of data..." as recited in Claim 8; "...an allocator", "...a reallocater", "...a reserver", "...a setter", and "...a transmitter..." as recited in claim 9; "...a definer.." as recited in claims 10, 11, and 13; "...a transmitter" and "...a report from the meter to the rating device" as recited in claim 12; "...a meter configured to measure" as recited in claim 15; "...a processor" as recited in claims 14 and 15; "...a reserver" and "...a transmitter" as recited

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in claim 14 as new matter since the specification as originally written does not support the newly added claim and/or claim language.

Conclusion

57. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37CFR 1.136(a).

58. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period fro reply expire later than SIX MONTHS from the date of this final action.

59. Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to **Kimberly L. Evans** whose telephone number is **571.270.3929**. The Examiner can normally be reached on Monday-Friday, 9:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **John Weiss** can be reached at **571.272.6812**.

60. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

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information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see [<http://portal.uspto.gov/external/portal/pair>](http://portal.uspto.gov/external/portal/pair). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free). Any response to this action should be mailed to: **Commissioner of Patents and Trademarks**, P.O. Box 1450, Alexandria, VA 22313-1450 or faxed to **571-273-8300**. Hand delivered responses should be brought to the **United States Patent and Trademark Office Customer Service Window**: Randolph Building 401 Dulany Street, Alexandria, VA 22314.

/KIMBERLY EVANS/Examiner, Art Unit 3629

October 27, 2008

/John G. Weiss/

Supervisory Patent Examiner, Art Unit 3629